## TWO NEW SPECIES FROM IRAO

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ABSTRACT. Two new species are described from N Iraq: Serratula grandifolia P. H. Davis and Stachys iraqensis Bhattacharjee.

## Serratula grandifolia P. H. Davis, sp. nov.

Species insignis, foliis basalibus maximis, inflorescentia late corymbosopaniculata multicapitulata. A S. aznavourii Bormm. (cujus foliis radicalibus ignotis) caulibus et foliis glabris, corymbis densioribus, capitulis minoribus brevius pedunculatis, phyllariis paucioribus intimis acutissimis, floribus minoribus paucioribus valde differt.

Herba perennis, elata, verosimiliter saltem 1 m alta. Caulis erecta, sulcata, glabra, decomposito-paniculata. Folia basalia magna, lyrato-subpinnatisecta, viridi-membranacea, glabra, lamina petiolo multo longiore; segmentum terminale ovatum, 28-42 × 16-21 cm, basi hastatum vel sagittato-hastatum, marginibus dentatis, dentibus late triangularibus mucronatis; segmenta basalia 2-6, subapproximata, + oblonga, 1-4 cm longa, rachidem angustissime alatam attingentia. Folia caulina inferiora(?) ovata, c. 28 cm longa, basi profunde bilobulata; mediana minora, 10-15 cm longa (petiolo excluso), ovata, hastata; superiora ovata, basi truncata, brevipetiolata; folia caulina ramos paniculae subtendentia, anguste elliptica, integra, basi attenuata, sessilia I-5 × 0.4-I.5 cm; folia corymborum minima, lineari-filiformia, bracteiformia. Inflorescentia generalis corymboso-paniculata saltem 20-30 cm lata, multicapitulata. Capitula numerosa, pedunculata (pedunculis 3-30 mm longis) in corymbos densos 3-8 cm latos disposita. Involucrum ovoideum, 18-20 mm longum, 7-8 mm latum. Phyllaria 4(-5)-seriata, gradatim imbricata, virescentia, pilosa, mucronata, externa ovata, mediana oblongo-ovata; phyllaria intima multo longiora, glabra, linearia, superne lanceolata purpurascentia. Flores 10-12, hermaphroditi, purpurei, exserti, erecti. Corolla 18-20 mm longa; tubus inferior c. 8 mm longus; limbus in lobos lanceolatos 4-5 mm longos fissus. Achenia ad 8 mm longa, umbone provisa; pappus 8 mm longus, setis longe scabris, ramis lateralibus diametro rachidis aequilongis.

N Iraq. [Sulaimaniya Liwa] Kopi Qaradagh, 4500 ft., abundant in oak forest on N facing slopes, 15 vi 1959, Wheeler Haines 1534 (holo. E); ibid., 4000– 4500 ft., Quercus aegilops woodland, 16 vi 1959, A. D. Q. Agnew 4921; ibid., 5 v 1958, M. E. D. Poore 542 (in bud).

A very distinct and local endemic, remarkable for the giant hastate terminal segment of its basal leaves. It seems to have most in common with the rare S. aznavourii Bornm. from N Anatolia (Amasya), which resembles it in having a wide corymbose panicle, but for which the basal leaves are unknown. The latter differs from the new species in its arachnoid stems and cauline leaves, laxer corymbs, larger longer-peduncled capitula, more numerous  $\pm$  7-seriate phyllaries with the innermost series subobtuse, and larger more numerous flowers.

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Stachys iragensis Bhattacharjee, sp. nov.

Affinis S. setiferae C. A. Meyer sed foliis floralibus haud aristatis, apicibus bractearum molliter herbaceis, dentibus caldycis brevius mucronatis (mucrone 0-2-0-5 mm longo) tandem erectis differt.

Herba perennis (vel annua?) ramosa, Rami floriferi 25-50 cm longi, effusi, plerumque simplices superne ramosi. Indumentum leviter et patentim pilosum pilis eglandulosis et paucis brevibus glandulosis. Folia caulina oblongolanceolata vel lanceolata, 2-5 cm longa, 0.65-1.6 cm lata, leviter serrata vel subintegra, basi cuneata, apice acuta, herbacea vel molliter spinulescentia; petiolus 0·1-0·5 cm longus. Folia floralia sessilia vel subsessilia, ovatolanceolata, 0.8-2 cm longa, 0.4-1.2 cm lata, integra, basi cuneata, apice acuta herbacea, molliter pubescentia. Verticillastri 4-6-flori, remoti, 1-4 cm distantes, superne approximati. Bracteae lineares vel lineari-lanceolatae, 1-4.2 mm longae, apice molliter herbaceae, Pedicelli 0.5-0.8 mm longi, Calvx subbilabiatus, campanulatus vel subcampanulatus, 6-7 mm longus, basi molliter pubescens; dentes subaequales late triangulares vel oblongi, dimidio tubi longiores, in fructu accrescentes tubum aequantes; apice molliter spinescentes mucrone 0.2-0.5 mm longo. Calyx fructifer 7.5-8 mm longus, dentibus 3.5-3.7 mm longis erectis, fauce haud hirsutus. Corolla 10-11 mm longa, in sicco pallide brunnescens; tubus 5-5.7 mm longus, subexsertus, intus annulatus; galea 2.5-3 mm longa, leviter retusa, concava; labium inferius 4.3-4.5 mm longum. Stamina tubo paulo exserta, paria exteriora 2 mm longa, interiora 1.5 mm longa. Nuculae late rhomboideo-ellipsoideae, 1.5-1.7 × 1.2-1.3 mm, laeves, nigro-fuscae, apiculatae, crista adaxiali prominenti.

N IRAO d. Mosul Liwa, Garagu, near Sarsang, on waste ground by stream and irrigated cultivation, annual, 8 viii 1961, Agnew & Haines 800 (holo. E; iso. K).

Although the field label describes the plant as annual, the base of the specimen is not present on the sheet. Judging by its affinity, a perennial habit seems more probable.